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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/796,344

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Yuichiro Ohta

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06/11/2008

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EXAMINER

LUND, JEFFRIE ROBERT

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

06/11/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/796,344

**Applicant(s)**

OHTA, YUICHIRO

**Examiner**

Jeffrie R. Lund

**Art Unit**

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 February 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 and 9-21 is/are pending in the application.  
4a) Of the above claim(s) 18 and 19 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-7, 9-17, 20 and 21 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 12 April 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/15/07.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Claims 18 and 19 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The original claims are directed to a coupling member which connects the vacuum pump to the floor member panel so as to prevent shrinkage of the flexible pipe. Claims 18 and 19 are directed to strengthening the flexible pipe by adding a layer of rubber or resin material. Thus, the inventions are distinct from the original invention.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 18 and 19 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03. If claim 1 is found allowable, claims 18 and 19 will be rejoined and allowed also.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 20 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had

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possession of the claimed invention. Claim 20 requires that the coupling member couples the fixing block with the side of the flexible pipe facing the vacuum pump. The specification and claim 1 do not support the idea that the coupling member is attached to the flexible pipe. Claim 1, the specification and the drawings all teach that the coupling member is attached to the inlet pipes 32 of the vacuum pump 18.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 requires that the coupling member "connects said vacuum pump to said floor panel". Claim 20 requires that the coupling member couple "the fixing block with a side of the flexible pipe that faces the vacuum pump" it is not possible for the coupling member to be attached to both the vacuum pump and the flexible pipe.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-7, 8, 10, 12-17, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicants Admitted Prior Art (AAPA) in view of Sweeny US Patent 1,559,804.

The AAPA discloses vacuum bonding chambers 16 for bonding liquid crystal display devices that include vacuum pumps 18 attached to the bonding chamber 16 by a flexible bellows-like pipe 36. The vacuum bonding chamber and vacuum pump are mounted on a floor panel 50 with a gap between the vacuum pump and the floor panel via a base frame and fittings, and includes a cushion member between the vacuum pump and the floor panel. (Page 2 lines 20-33, Figure 8) The vacuum pump is lighter than the vacuum chamber.

The disclosed prior art does not teach a mechanism, specifically, a coupling bar attached to the vacuum pumps near the flexible pipe and the floor panel via a fixing block to reduce the shrinking of the flexible pipe.

Sweeny teaches a mount for supporting a flexible hose that prevents damage to vacuum inlet pipe (i.e. elbow 11 and hose coupling 27) caused by tensile forces acting on the vacuum, the vacuum includes: a flexible pipe 16 attached to the vacuum by the vacuum inlet pipe (i.e. elbow 11 and hose coupling 27), coupling members (i.e. support rods 18, 18', 22, 24) connected between the vacuum inlet pipe (i.e. elbow 11 and hose coupling 27) and a floor panel (i.e. truck 23) via a fixing block (object that ties coupling members to floor panel) in a direction in which the flexible pipe extends, and opposite the vacuum. (See figures 1 and 1a).

The motivation for supporting the vacuum inlet pipe is to keep all the components in place and to prevent damage from forces placed on the vacuum inlet pipe so that the vacuum inlet pipe will function as required and not be damaged in use as taught by Sweeny. Furthermore, it has been held that it is obvious to apply a known technique to

a known device ready for improvement to yield predictable results (see *KSR International Co. v. Teleflex Inc.*) In this case, it would have been obvious to use coupling members of Sweeny that prevent movement of the vacuum inlet pipe due to tensile forces applied to the vacuum inlet, in the known vacuum inlet of a vacuum bonding chamber which are moving as a result of tensile forces applied by the collapse of the flexible pipeline, to yield the predictable result of stopping or preventing the movement of the vacuum inlet pipe of the known vacuum bonding apparatus.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to support the vacuum inlet pipes in the apparatus of the AAPA to prevent movement and damage caused by forces applied to the vacuum inlet pipe as taught by Sweeny.

8. Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA and Sweeny as applied to claims 1-8, and 10 above, and further in view of Elliotte, US Patent 2,663,894.

AAPA and Sweeny differ from the present invention in that they do not teach that the coupling member is a chain with a fixing block.

Elliotte teaches supporting the flexible hose 59 with sturdy beams 62 and chains 106 attached to fixing blocks 105 (see figure 1). It is also well known in the art that a load can be supported with a chain in tension.

The motivation for replacing a ridged rod of AAPA and Sweeny with a chain and fixing block as taught by Elliotte is to provide an alternate method of supporting a load. Furthermore, it has been held that the simple substitution of one known element for

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another to obtain predictable results is obvious (see *KSR International Co. v. Teleflex Inc.*). In this case, it would have been obvious to replace the rod of AAPA and Sweeny that supports a tensile load with a chain and block of Elliotte that is also well known to support a tensile load.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to support the vacuum inlet pipes in the apparatus of the AAPA and Sweeny using a chain and fixing block as taught by Elliotte.

### ***Response to Arguments***

9. Applicant's arguments filed November 2, 2007 have been fully considered but they are not persuasive.

In regard to the argument that the rod 24 merely holds the air hose and does not fix the air hose, the Examiner disagrees. First the terms "fix" and "hold" are synonymous. Second, Applicant has ignored the rods 18, 18', and 22 which work with rod 24 to firmly fix or hold the air hose in place and keep it from moving.

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrie R. Lund whose telephone number is (571) 272-1437. The examiner can normally be reached on Monday-Thursday (10:00 am - 9:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-

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273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jeffrie R. Lund/  
Primary Examiner  
Art Unit 1792

JRL  
6/7/08